

Notice of Allowability

Application No.

09/518,937

Examiner

Maikhanh Nguyen

Applicant(s)

DIVAKARAN ET AL.

Art Unit

2176

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Amendment filed 10/22/2007 and the telephonic interview 01/03/2008.
2. ☒ The allowed claim(s) is/are 1-7 and 10-13 (now renumbered as 1-11).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material

5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

William S. Bashore
WILLIAM BASHORE
PRIMARY EXAMINER

EXAMINER'S AMENDMENT

- I. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the Issue Fee.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the Issue Fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

II. **EXAMINER'S AMENDMENT:**

Authorization for this examiner's amendment was given in a telephone interview with Mr. Clifton Mueller (Reg. No. 57, 836) on January 3, 2008.

The application has been amended as follows:

In the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Current Amended) A computer implemented method for ordering multimedia content, comprising the steps of:

segmenting the multimedia content to extract video objects, in which the objects are video object planes;

extracting and associating features of the video object to produce content entities, wherein the content entities are recursive data structures comprising features, relations, directed acyclic graphs and containment sets;

coding the content entities to produce directed acyclic graphs of the content entities, each directed acyclic graph representing a particular interpretation of the multimedia content;

measuring high- level temporal attributes of each content entity;

assigning the measured high- level temporal attributes to each corresponding content entity in the directed acyclic graphs to order the content entities of the multimedia content; ~~and~~

comparing the ordered content entities in a plurality of the directed acyclic graphs to determined similar interpretations of the multimedia content;

traversing the multimedia content according to the directed acyclic graph and the measured attributes assigned to the content; and

summarizing the multimedia content according to the directed acyclic graph and the measured attributes assigned to the content entities.

2. (original) The method of claim 1 wherein the measured attributes include intensity attributes.
3. (original) The method of claim 1 wherein the measured attributes include direction attributes.
4. (previously presented) The method of claim 1 wherein the measured attributes include spatial attributes and the order is spatial.
5. (previously presented) The method of claim 1 wherein the measured attributes include temporal attributes and the order is temporal.
6. (original) The method of claim 1 wherein the measured attributes are arranged in an increasing rank order.
7. (original) The method of claim 1 wherein the measured attributes are arranged in an decreasing rank order.
- 8-9. (Canceled)

10. (original) The method of claim 1 wherein the multimedia content is a three dimensional video sequence

11. (original) The method of claim 1 wherein nodes of the directed acyclic graphs represent the content entities and edges represent breaks in the segmentation, and the measured attributes are associated with the corresponding edges.

12. (Currently Amended) The method of claim [[8]] 1 wherein at least one secondary content entity is associated with a particular content entity, and wherein the secondary content entity is selected during the traversing.

13 (Currently Amended) The method of claim [[9]] 1 wherein a summary of the multimedia is a selected permutation of the content entities according to the associated ranks.

Contact information

III. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maikhanh Nguyen whose telephone number is (571) 272-4093. The examiner can normally be reached on Monday - Friday from 9:00am – 5:30

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pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doug Hutton can be reached at (571) 272-4137.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MN

William L. Bashore
WILLIAM BASHORE
PRIMARY EXAMINER